



Forest  
Service

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File Code: 3420  
Route To:

Date: April 22, 2008

Subject: Testing of Acecap Implanted Trees For Pesticide Residue, Sacramento Ranger District, Lincoln National Forest

To: Terry Delay, Acting District Ranger, Sacramento Ranger District

As you are aware, in August and September 2007, 70 trees in four campgrounds on the Sacramento Ranger District were selectively implanted by District personnel with acecap plugs, a solid, systemic formulation of acephate, an organophosphate insecticide. The objective of these treatments was to protect tree foliage by having the tree sap dissolve the insecticide and translocate it to the crown before the *Nepytia janetae* caterpillars began feeding. Once the caterpillars started feeding a lethal dose of the insecticide would be ingested before they could cause significant defoliation. Campgrounds treated with the acecap plugs included Pines CG (40 trees), upper and lower Fir Group CGs (10 trees each), and Saddle and Apache CGs (10 trees each). Trees implanted included Douglas-fir, white fir, and ponderosa pine.

During the week of April 7, 2008, I revisited these campgrounds to collect foliage samples. Foliage samples were collected from five implanted trees at Pines, Saddle, and Apache Campgrounds. Samples were also obtained from non-treated trees from each of these sites for comparison. No foliage samples were obtained from the upper and lower Fir Group Campground sites since the implanted trees were either too heavily defoliated or the tree crowns were too high to sample with a pole pruner. Foliage samples were placed in one gallon zip lock freezer bags and sent to Dr. Brian Strom, Southern Research Station, Pineville, LA, to be tested for the presence of acephate or its primary metabolite methamidophos both of which are toxic to foliage feeding insects. If the foliage samples test positive for acephate and/or its primary metabolite, this would indicate the insecticide was successfully translocated to the trees foliage prior to larval feeding.

I also conducted a *Nepytia janetae* larval survey at Pines, Saddle, Apache, and Sleepygrass CGs, and at three locations along Forest Road 64. Two lower crown branches were sampled from five trees at each site using the lower crown beating technique. The results of this larval survey indicated the *Nepytia janetae* larval populations were at undetectable levels at all sites sampled. With any luck, these loopers will not return to outbreak levels in the Sacramento Mountains for another 30-40 years. I repeat, if were lucky!

We will forward the results of the foliage tests to you as soon as they are completed.



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If you have any please give me a call at (505) 842-3287 or <mailto:trogers@fs.fed.us>.

*/s/ Terrence J. Rogers*

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